**Amendments to the Specification:**

Please amend paragraph **[0001]** as follows:

**[0001]** The present patent application is a divisional of U.S. Patent Application No. 10/209,539, filed on July 30, 2002, now issued U.S. Patent No. 6,676,569, which is a divisional of U.S. Patent Application No. 09/882,517, filed on June 15, 2001, now issued U.S. Patent No. 6,454,679, which is a divisional of U.S. Patent Application No. 09/326,941, filed on June 7, 1999, which claims the benefit of U.S. Provisional Patent Application No. 60/088,662, filed on June 9, 1998, of the same title and by the same inventor, which is based on Disclosure Document No. 423121 by the same inventor, received August 19, 1997 in the Patent and Trademark Office, all of each of which are incorporated herein by reference.

Please amend paragraph **[0185]** as follows:

**[0185]** The sprint mode (column I, FIG. 2A) is a mode of operation of the present invention which provides a simulation of a forward sprint by accurately controlling the velocity V of the belt 110 in response to the forces $F_a$ and $F_f$ produced by the subject 101 on the aft and fore harness tethers 136 and 138 according to the equation of motion:

$$dV/dt = [ (F_a - F_f) - m_l^* g \sin\theta - 0.5 C_l \rho Q V^2 ] / m_l^*, \quad (3.1.1)$$

where $\rho$ is the density of air, Q is the cross-sectional area of the subject 101, and the last term in the brackets represents an approximation of the force of air resistance. The iterative form of equation (3.1) which the CPU 310 and brake/motor controller 370 utilize to control the brake 172 and motor 170 is

$$V(update) = V + [ (F_a - F_f) - m_l^* g \sin\theta - 0.5 C_l \rho Q V^2 ] [[/]] (t_{inc} / m_l^*) . \quad (3.1.2)$$

Please amend paragraph **[0189]** as follows:

**[0189]** The bob sled mode (column II, FIG. 2A) is a mode of operation of the present invention which provides a simulation of an athlete performing a bob sled start by accurately controlling the velocity V of the belt 110 in response to the applied forces $F_a$ and $F_f$ according to the equation of motion:

$$dV/dt = [ (F_a - F_f - F_d) - (m_1^* + m_2) g \sin\theta - 0.5 C_1 \rho Q V^2 ] / (m_1^* + m_2) \quad (3.2.1)$$

where $m_2$ is the mass of the bob sled, $F_d$ is the drag force of the bob sled on snow or ice (which may be a function of velocity), $\rho$ is the density of air, Q is the cross-sectional area of the subject 101, and the last term in the square brackets is an approximation of the force of air resistance. The iterative form of equation (3.1) which the CPU 310 and brake/motor controller 370 utilize to control the brake 172 and motor 170 is

$$V(update) = V + [ (F_a - F_f - F_d) - (m_1^* + m_2) g \sin\theta - 0.5 C_1 \rho Q V_s^2 ] \text{ [[/]] } (t_{inc} / (m_1^* + m_2)) . \quad (3.2.2)$$

Because an athlete starts a bob sled by rocking it back and forth before running forward with it, forces on the belt 110 in both the positive and negative directions are exerted so both the fore and aft harness tethers 138 and 136 are used. In the bob sled mode of operation, the exertions are therefore concentric and eccentric, the velocity and the exerted forces are non-constant, and, as per the mechanical specificity principle and the movement specificity principle, bob sled simulations are particularly useful for the training of bob sled athletes. If the virtual mass $m_1^*$ is to differ from the actual mass $m_1$ of the subject 101, then the overhead harness 150 must also be utilized.